

Insights from the Inside

Some new Features in
VGSTUDIO MAX 3.1

VG Support



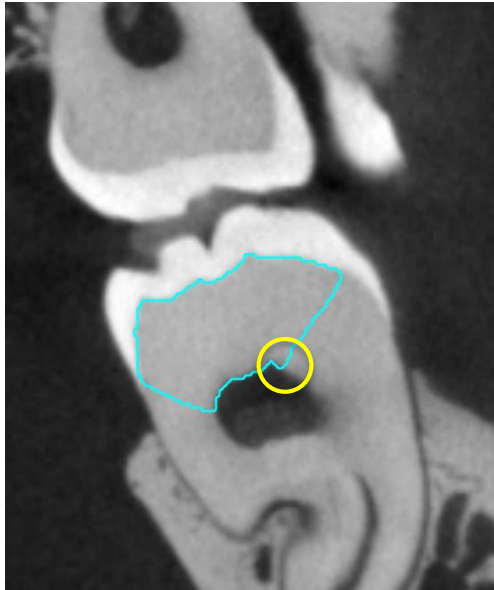
Simplify your Daily Work with VGSTUDIO MAX 3.1

- Part I – Talk
Dr. Barbara Brehm
- Part II – Live presentation
Yannick Luck

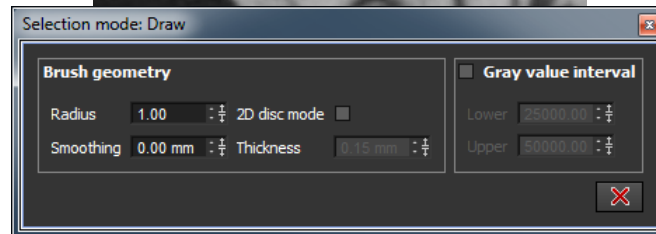


Draw Tool with Gray Value Interval

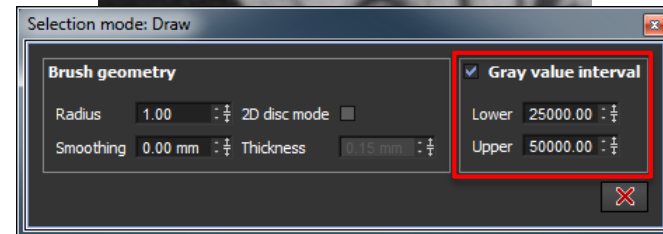
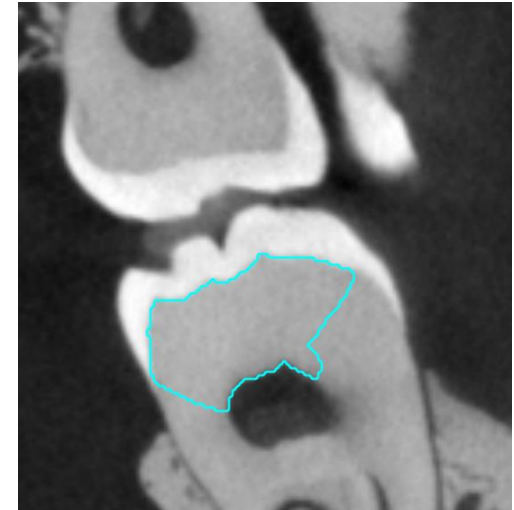
Start ROI



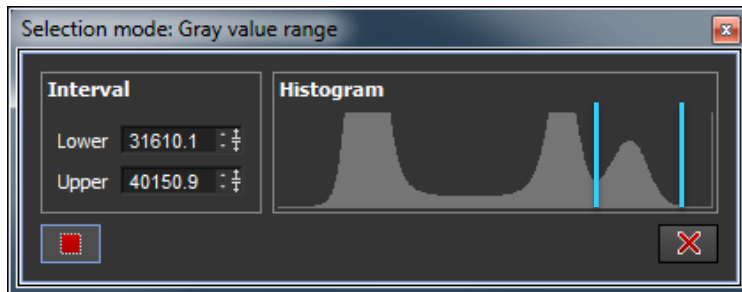
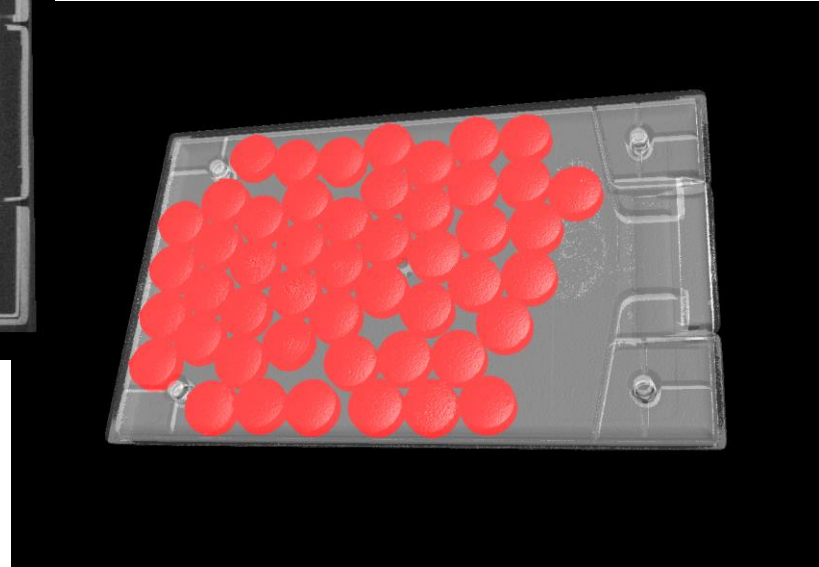
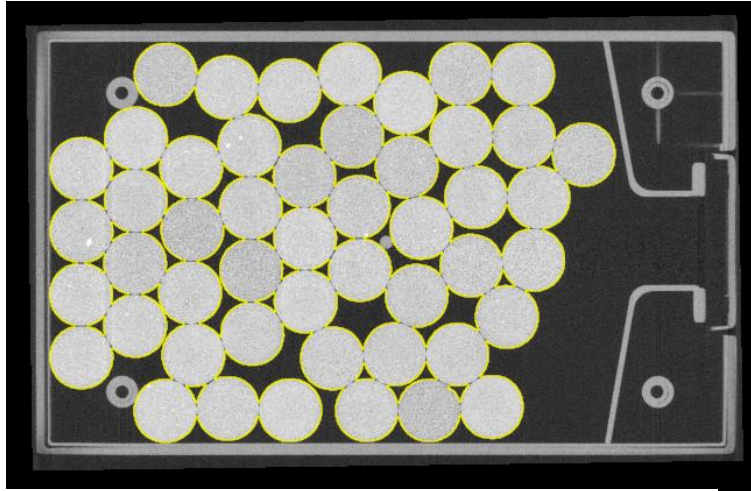
Without gray value interval



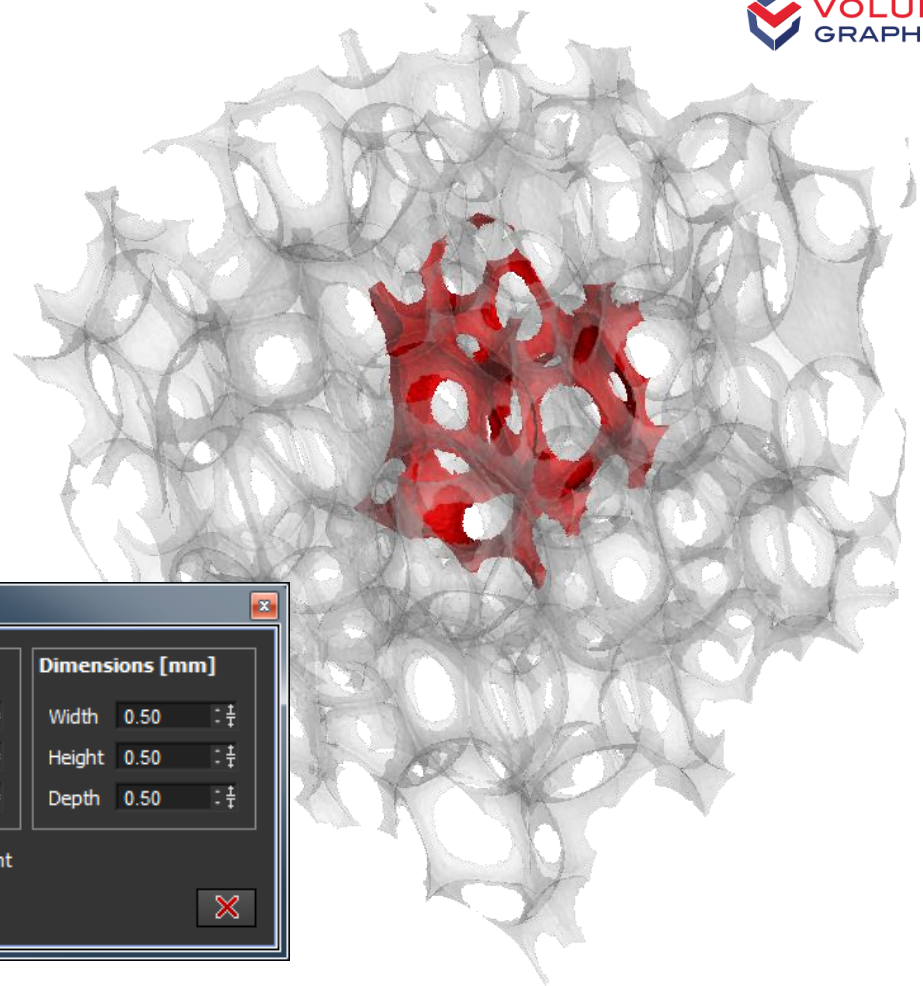
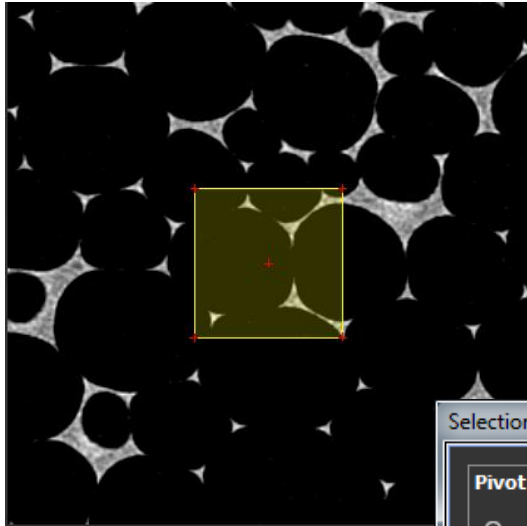
With gray value interval




Gray Value Range with Histogram








Define ROI Dimensions



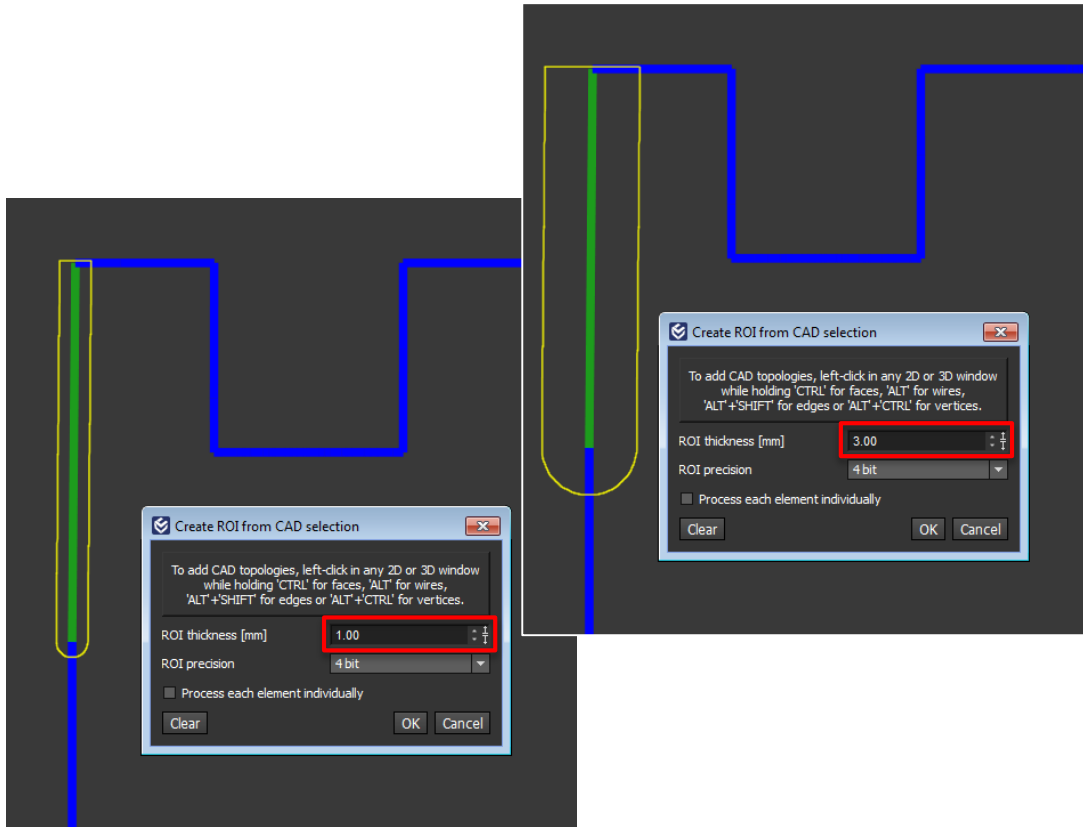
Selection mode: Rectangle

| Pivot point | Position [mm] | Dimensions [mm] |
|---|-----------------------------|---|
|  | X 0.00 Y 0.00 Z -0.30 | Width 0.50 Height 0.50 Depth 0.50 |

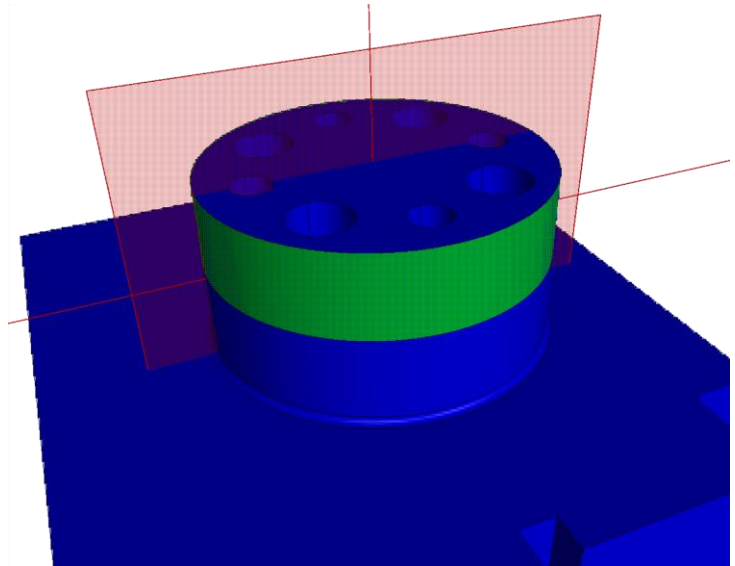
Make slice views follow pivot point

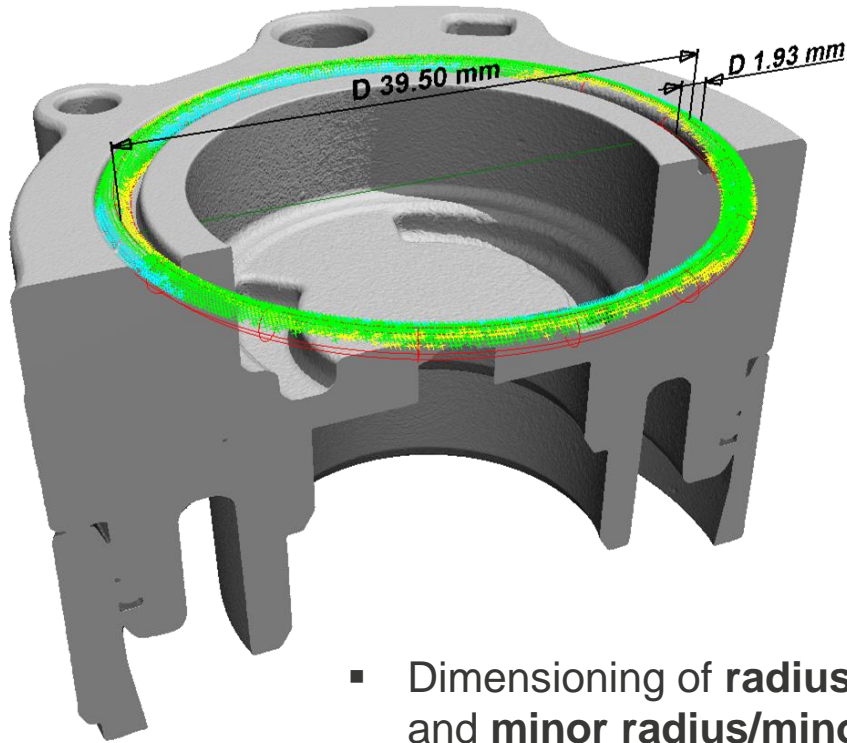
ROI from CAD Selection



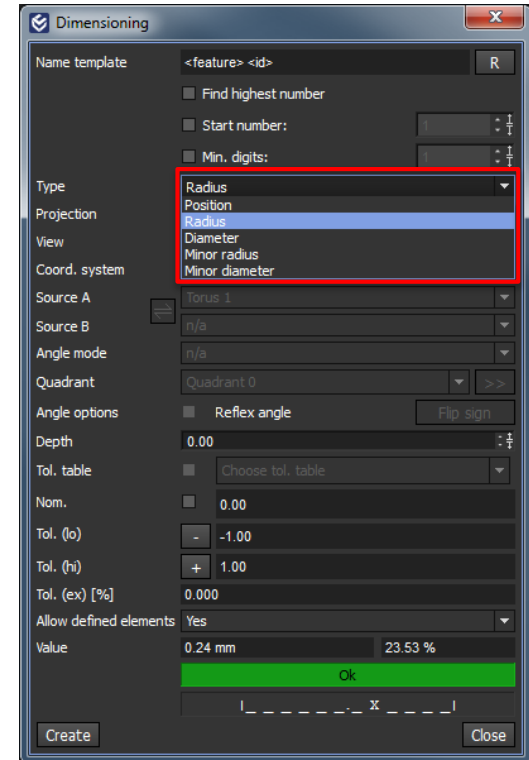
- Create ROI and define thickness



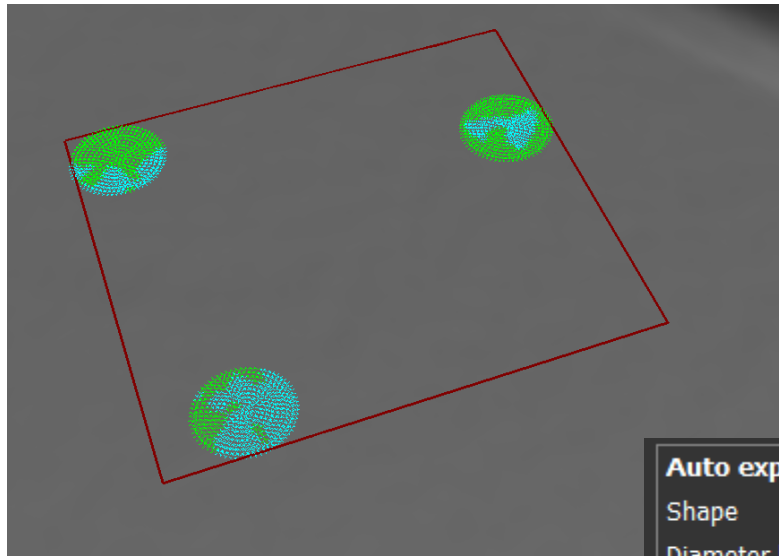
Torus



- Dimensioning of **radius/diameter** and **minor radius/minor diameter**



Adjustable Auto Expand



- Useful for fitting datum targets
- Increases fitting stability on rough surfaces

Auto expand options

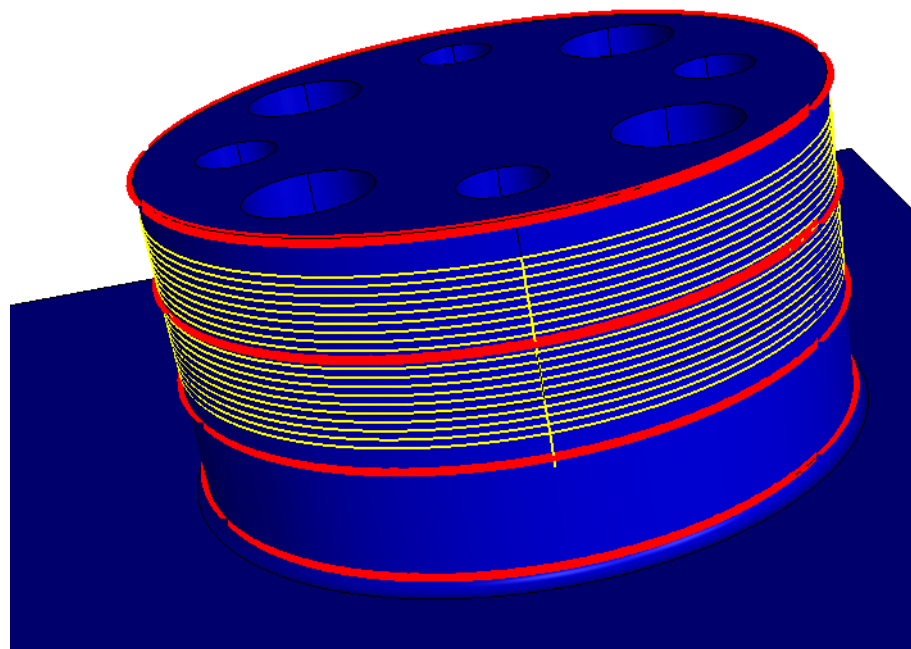
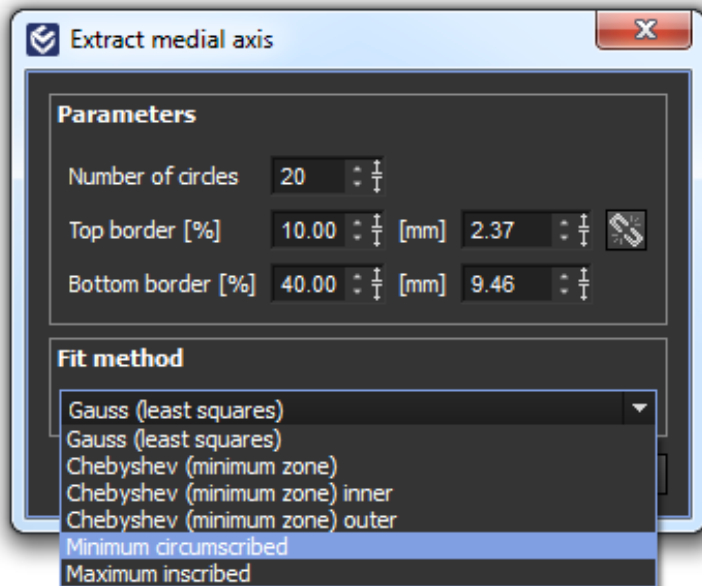
Shape Disk Square

Diameter [mm] 2.00

Step width [mm] 0.10

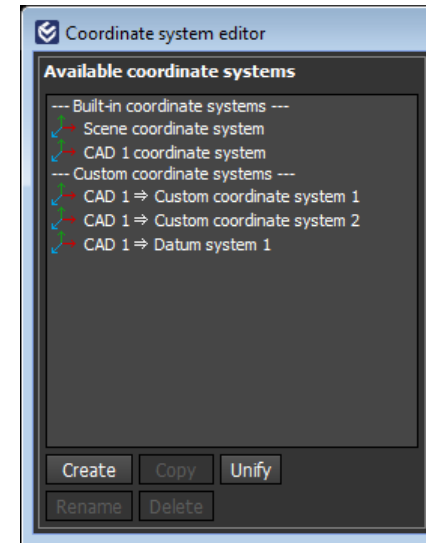
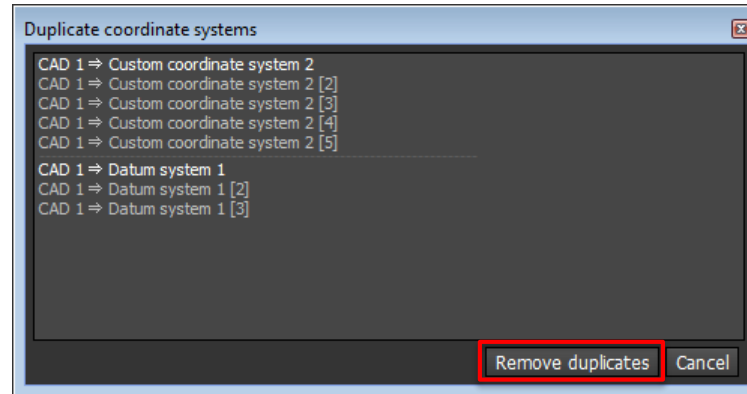
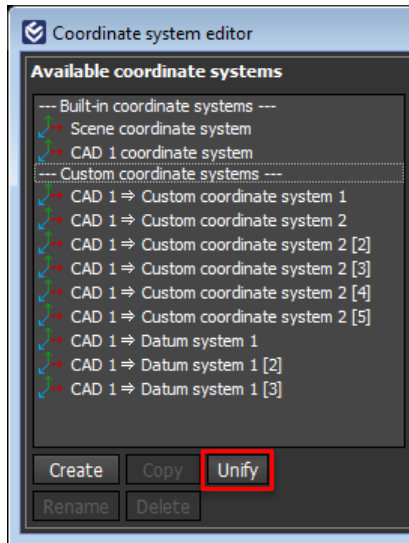
Customizable Extraction of Medial Axis

- Specify **Top border** and **Bottom border** separately
- Select **Fit method** for resulting circles



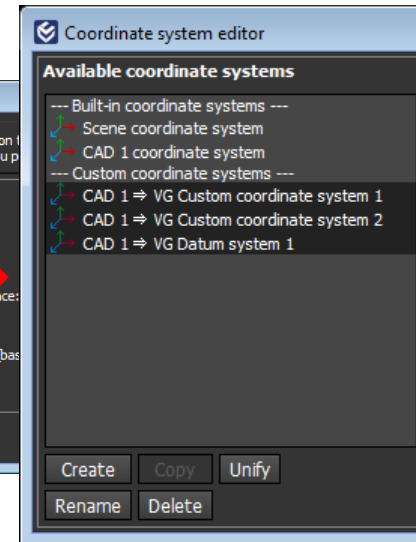
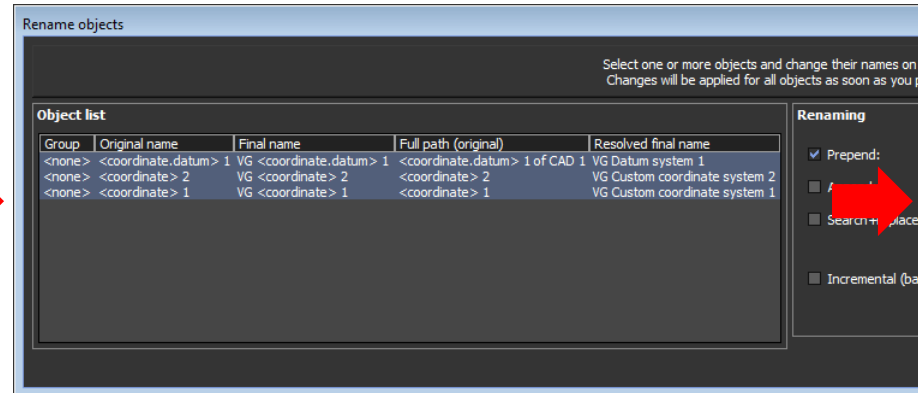
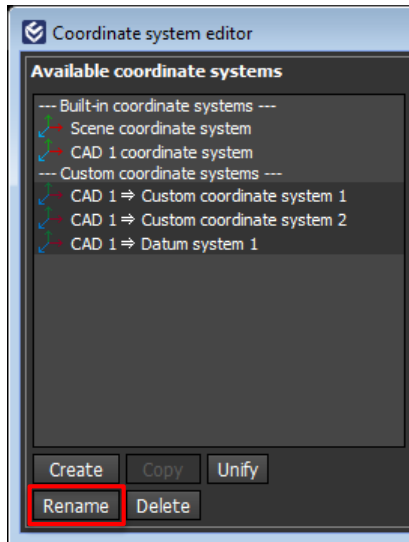
Coordinate System Editor

- Editing several coordinate systems at once
 - Unifying



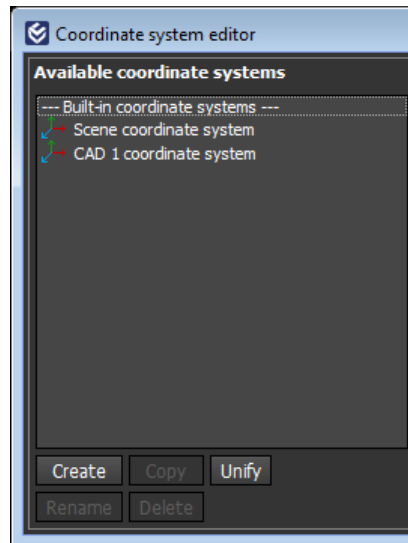
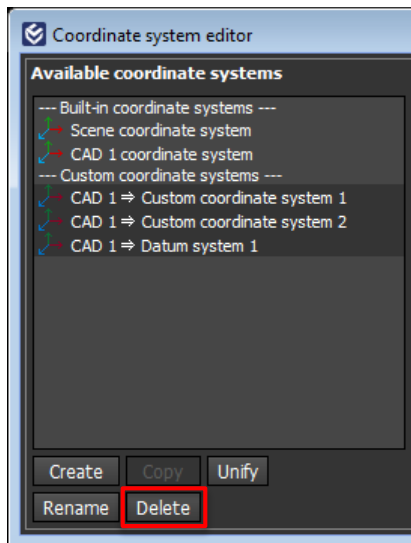
Coordinate System Editor

- Editing several coordinate systems at once
 - Unifying
 - Renaming



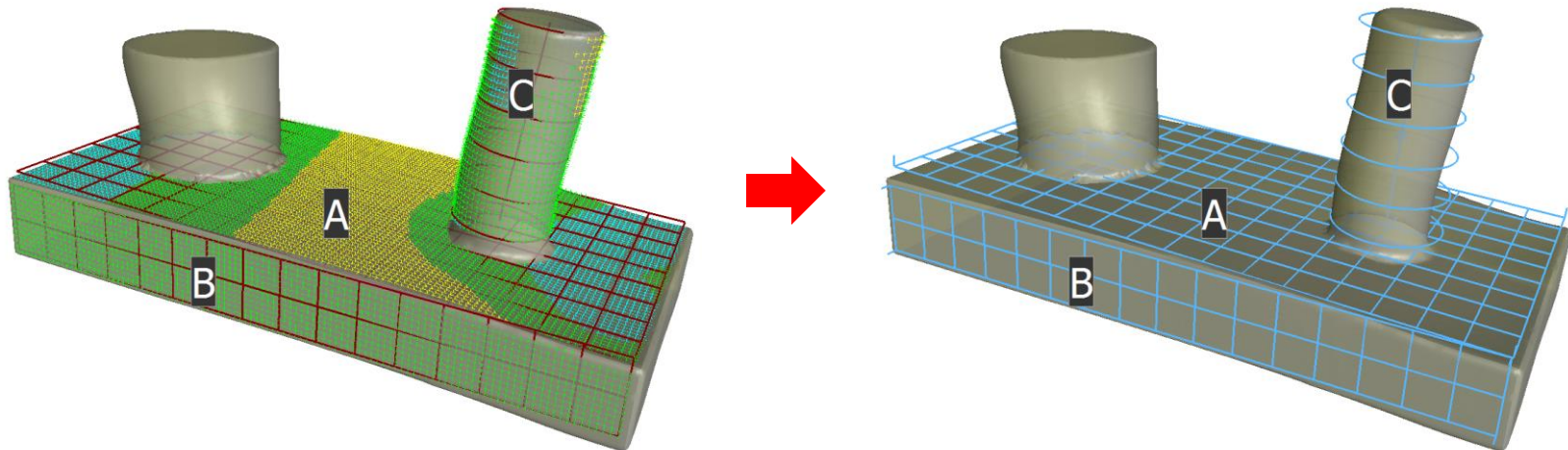
Coordinate System Editor

- Editing several coordinate systems at once
 - Unifying
 - Renaming
 - Deleting

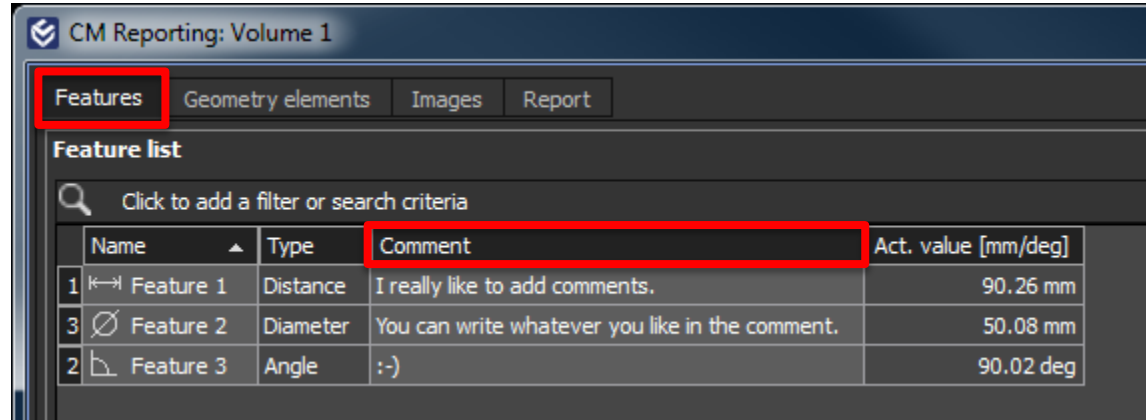


Datum Systems

- Common datum types and modifiers available
- Datum geometry elements refitted:
 - Considering perpendicularity constraints
 - Using contacting fit or Gauss
- Implemented according to DIN EN ISO 5459

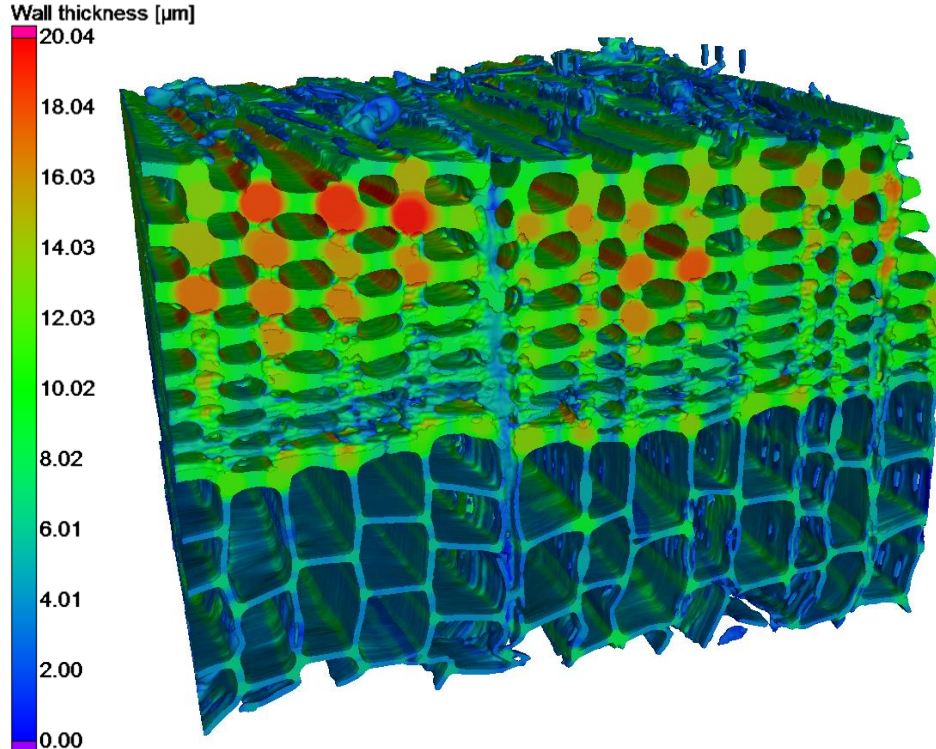


Comments in CM Reporting

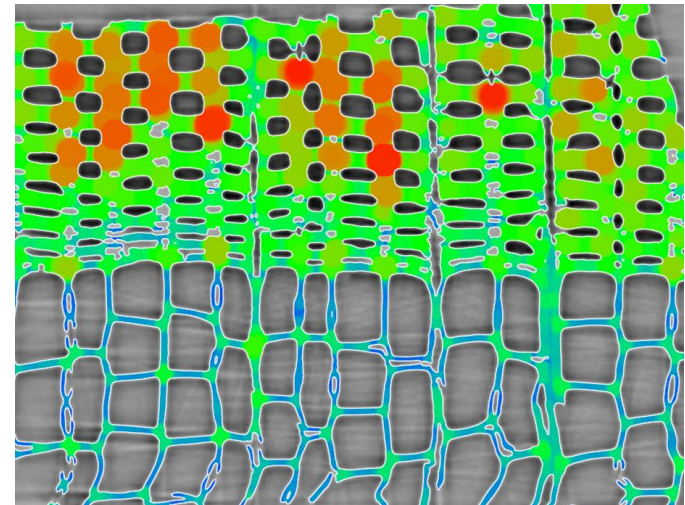


| Name | Type | Comment | Act. value [mm/deg] |
|-----------|----------|---|---------------------|
| Feature 1 | Distance | I really like to add comments. | 90.26 mm |
| Feature 2 | Diameter | You can write whatever you like in the comment. | 50.08 mm |
| Feature 3 | Angle | :) | 90.02 deg |

Sphere Method for Wall Thickness Analysis

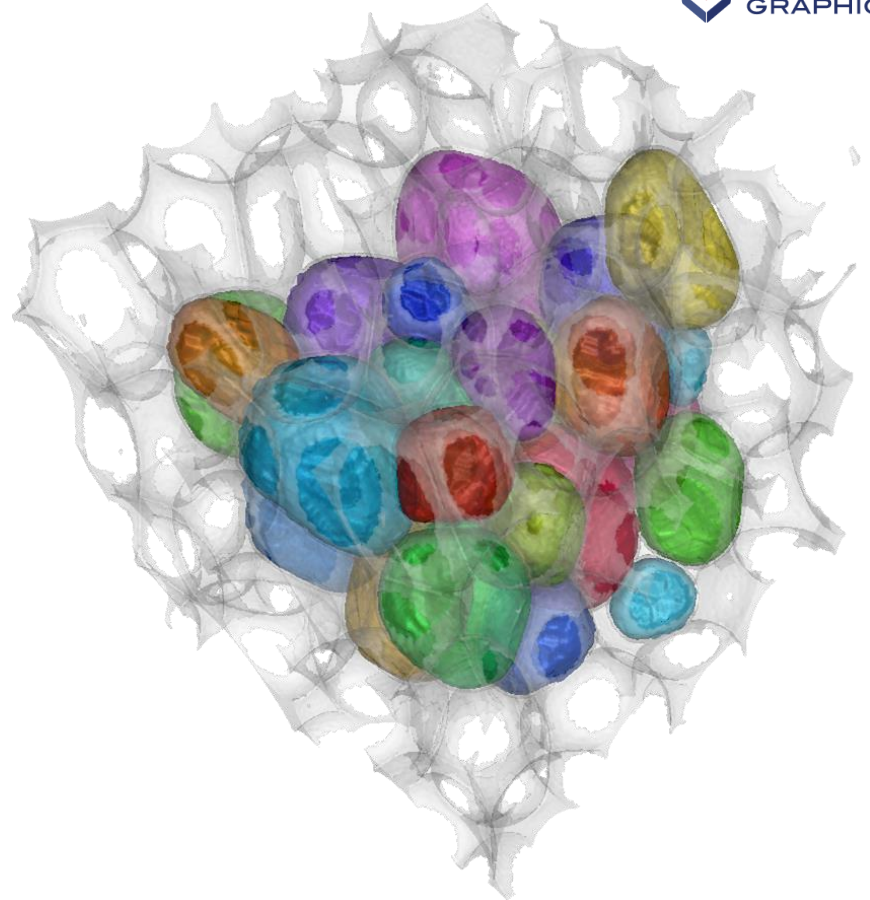
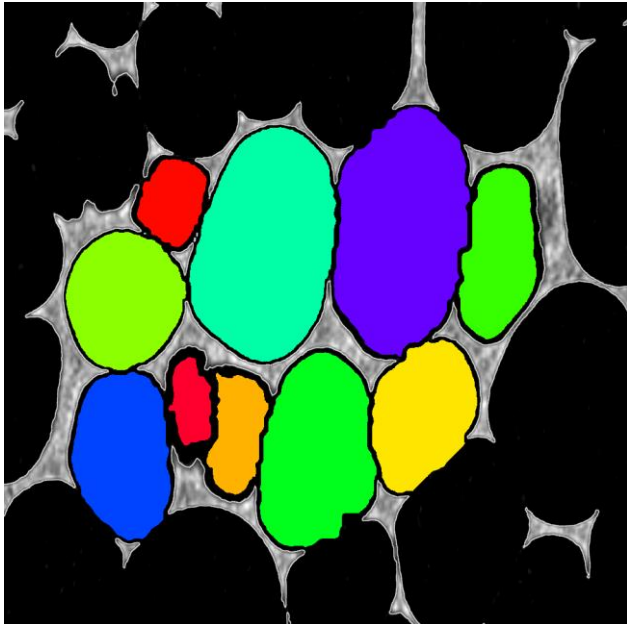


- Wall thickness determined by largest inscribed sphere

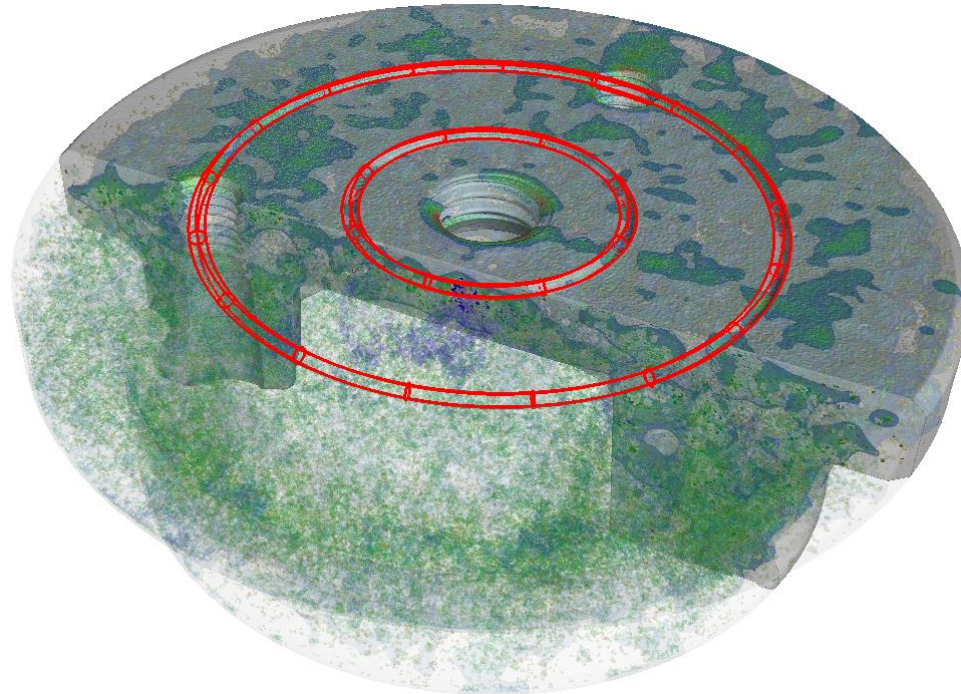


Foam Structure Analysis

- Option to exclude border cells from statistics and visualization



Part II – Live Presentation



Thank you

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